

20-8168



Dart Aerospace Ltd.
1270 Aberdeen St
Hawkesbury, ON
K6A 1K7
Canada

Tel (613) 632-5200
Fax 613 632-5246

649.5013E

Job Sheet 203738



5272283

Part No: 649.5013E

Job Qty: 252 ft

Part Name: Deflector



Part Weight: 0 lbs

Status: New

Priority: Medium

Job Created: 11/26/19

Job Tracking No:

Due Date: 3/27/20

Created By: Kimberley Guerin

Type: Stock

Description:

Note: DWG REV D

Ship Via:

Bill of Materials

Job Routing

Op No	Operation	Qty	Start Date	Due Date	Standard		Workcenter/Supplier		Sign-off
					Setup Hrs	Run Hrs	Workcenter / Supplier	Lead Time	
100	Purchasing - Ft	252 ft		3/27/20	0.00	0.00	Purchasing - 1		DAS 82 9-89
							Purchasing - 2		
							Purchasing - 3		
2019-11-27	POHBD45220 KA				x252				APR 21 2020
110	Packaging 2-1 - Receive - B4B	252 pcs		3/27/20	0.00	0.00	Packaging 2 - 1 - B4B		DAS 82 9-89
							Packaging 2 - 2 - B4B		
							Packaging 2 - 3 - B4B		
							Packaging 2 - 5 - B4B		
							Packaging 2 - 4 - B4B		
							Packaging 2 - 6 - B4B		
							Packaging 2 - 7 - B4B		
							Packaging 2 - 8 - B4B		
							Packaging 2 - 9 - B4B		
							Packaging 2 - 10 - B4B		
							Packaging 2 - 11 - B4B		
							Packaging 2 - 12 - B4B		
							Packaging 2 - 13 - B4B		
							Packaging 2 - 14 - B4B		
							Packaging 2 - 15 - B4B		
							Packaging 2 - 16 - B4B		
							Packaging 2 - 17 - B4B		
							Packaging 2 - 18 - B4B		
							Packaging 2 - 19 - B4B		
							Packaging 2 - 20 -		

Plex 11/27/19 8:37 AM Dart.Guerin.Kimberley

						B4B	
						Packaging 2 - 21 - B4B	
						Packaging 2 - 22 - B4B	
						Packaging 2 - 23 - B4B	
						Packaging 2 - 24 - B4B	
						Packaging 2 - 25 - B4B	
						Packaging 2 - 26 - B4B	
						Packaging 2 - 27 - B4B	
						Packaging 2 - 28 - B4B	
						Packaging 2 - 29 - B4B	
						Packaging 2 - 30 - B4B	
						Packaging 2 - 31 - B4B	
						Packaging 2 - 32 - B4B	
						Packaging 2 - 33 - B4B	
						Packaging 2 - 34 - B4B	
						Packaging 2 - 35 - B4B	
						Packaging 2 - 36 - B4B	
120 QC 6	252 pcs	3/27/20	0.00	0.00		QC 6 - 9	
						QC 6 - 68	
						QC 6 - 61	DAS
						QC 6 - 40	82
						QC 6 - 81	APR 29 2020 9-89
130 Packaging 3-1 - Stock - B4B	252 pcs	3/27/20	0.00	0.00		Packaging 3 - 1 - B4B	
						Packaging 3 - 2 - B4B	
						Packaging 3 - 3 - B4B	
						Packaging 3 - 4 - B4B	
						Packaging 3 - 5 - B4B	
						Packaging 3 - 6 - B4B	
						Packaging 3 - 7 - B4B	
						Packaging 3 - 8 - B4B	
						Packaging 3 - 9 - B4B	
						Packaging 3 - 10 - B4B	
						Packaging 3 - 11 - B4B	
						Packaging 3 - 12 - B4B	
						Packaging 3 - 13 - B4B	
						Packaging 3 - 14 - B4B	
						Packaging 3 - 15 - B4B	
						Packaging 3 - 16 - B4B	
						Packaging 3 - 17 - B4B	

DAS
82

APR 29 2020 9-89

					Packaging 3 - 18 - B4B	
					Packaging 3 - 19 - B4B	
					Packaging 3 - 20 - B4B	
					Packaging 3 - 21 - B4B	
					Packaging 3 - 22 - B4B	
					Packaging 3 - 23 - B4B	11/8 20/4/29
					Packaging 3 - 24 - B4B	
					Packaging 3 - 25 - B4B	
					Packaging 3 - 26 - B4B	
					Packaging 3 - 27 - B4B	
					Packaging 3 - 28 - B4B	
					Packaging 3 - 29 - B4B	
					Packaging 3 - 30 - B4B	
					Packaging 3 - 31 - B4B	
					Packaging 3 - 32 - B4B	
					Packaging 3 - 33 - B4B	
					Packaging 3 - 34 - B4B	
					Packaging 3 - 35 - B4B	
					Packaging 3 - 36 - B4B	
140 QC 21 - SA FT					252 ft	3/27/20
					0.00	0.00
					QC 21 - SA - 21	
					QC 21 - SA - 70	APR 29 2020 DAS 70
					QC 21 - SA - 53	9-89

Part Op 100 - (Purchasing)

Descriptions: 110 - Receive & Inspect for Damage & Mat'l Certs

120 - QC6- All purchased or subcontracted products

130 - Identify as per dwg & Stock Location: MAT035

140 - QC21- Final Inspection - Work Order Release

PO Details

Kaiser Aluminum (kai001-vu)



PO No: POHB045220

Line No: 1

Job BOM

Part / Item	Component Name	Quantity	Operation	Container
649.5013P	Deflector	252 ft (1 ea)	100-Purchasing - Ft	5272276 5270883

Job Allocations

Operation	Component Part	Required	Inventory	Allocated
100-Purchasing - Ft	649.5013P	252	0	0

Part Specifications
Specifications could not be found.

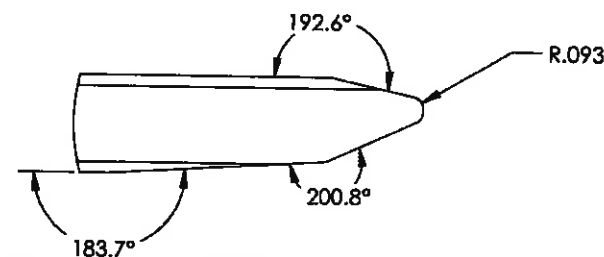
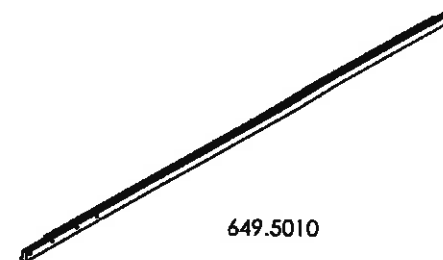
Plex 11/27/19 8:37 AM Dart.Guerin.Kimberley

THE INFORMATION CONTAINED IN THIS DRAWING IS THE SOLE PROPERTY OF APICAL INDUSTRIES DBA DART AEROSPACE. ANY REPRODUCTION IN PART OR WHOLE WITHOUT THE WRITTEN PERMISSION OF APICAL INDUSTRIES DBA DART AEROSPACE IS PROHIBITED.

NOTES: UNLESS OTHERWISE SPECIFIED

1. PRIMARY MATERIAL: 7075-T651 ALUMINUM PER AMS-QQ-A-250/12.
ALTERNATE MATERIAL: 7075-T6511 ALUMINUM PER AMS-QQ-A-200/11.
2. FINISH: ANODIZE IAW MPP-172 SECTION 2.1;
PRETREAT IAW MPP-172 SECTION 3.1;
PRIME IAW MPP-172 SECTION 4.2: 1-2 MIL MAX.
3. DE BURR AND BREAK ALL SHARP EDGES.
4. IDENTIFY IAW MPP-120. LASER ETCH P/N AND REVISION, 12 PT. CENTURY GOTHIC.
5. ALL DIMENSIONS SHOWN PRIOR TO FINISH.
6. PART DIMENSIONS CONTROLLED BY CAD MODEL FILE: 649.5010 DEFLECTOR.SLDPRG, LAST MODIFIED 04-16-12.
7. PART DIMENSIONS CONTROLLED BY CAD MODEL FILE: 649.5012 DEFLECTOR.SLDPRG, LAST MODIFIED 11-03-11.
8. PART DIMENSIONS CONTROLLED BY CAD MODEL FILE: 649.5013 DEFLECTOR.SLDPRG, LAST MODIFIED 04-16-12.
9. PART DIMENSIONS CONTROLLED BY CAD MODEL FILE: 649.5014 DEFLECTOR.SLDPRG, LAST MODIFIED 04-04-17.

REV.	DESCRIPTION	DATE	APPROVED
1	INITIAL RELEASE	11-03-11	P. BRAVO
2	INCORPORATED ECH 0477 AND 0478	04-16-12	P. BRAVO
3	INCORPORATED ECH 0479	03-06-12	P. BRAVO
4	INCORPORATED ECH 0481	03-28-12	P. BRAVO
5	INCORPORATED ECH 0482, 0483 & 0476	04-04-17	P. BRAVO



DETAIL A
SCALE 1:1

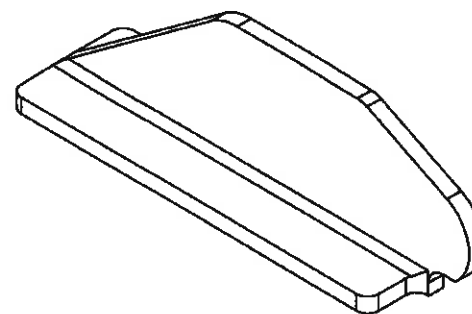
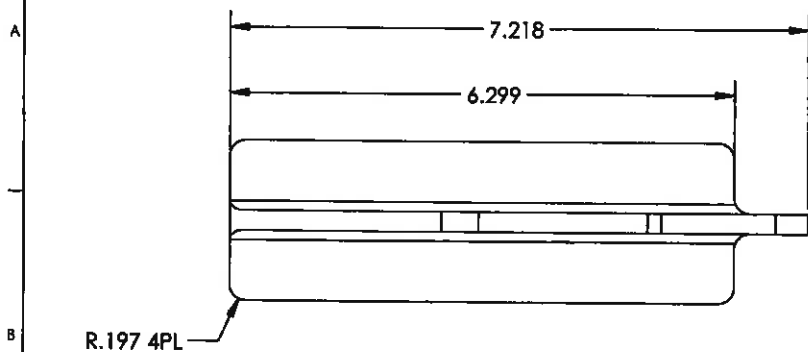
QTY	FIND #	PART #	DESCRIPTION	MAT'L	SPEC.
	5	649.5014	DEFLECTOR	△	△△△
	4	649.5013	DEFLECTOR	△	△△△
	3	649.5012	DEFLECTOR	△	△△△
	2	649.5011	DEFLECTOR	△	△△
	1	649.5010	DEFLECTOR	△	△△△

QTY		ORIGINAL DATE (DD-MM-YY)		PARTS LIST	
NEXT ASSY (S)		DRAWN BY		DART AEROSPACE 3030 ENTERPRISE CT., SUITE A VISTA, CA. 92081 (760)-724-5300 DEFLECTOR	
649.4700		P. BRAVO			
		DRAWING APPROVAL			
		CONTRACT NO.			
		UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ARE: 3 PLACES DECIMALS ±.01 2 PLACES DECIMALS ±.010 ANGLES ±.5°		SET	
				CAGE CODE	
				DWG. NO.	
				649.5000	
				SCALE	
				NONE	
				SHEET	
				1 OF 3	

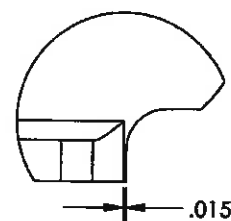
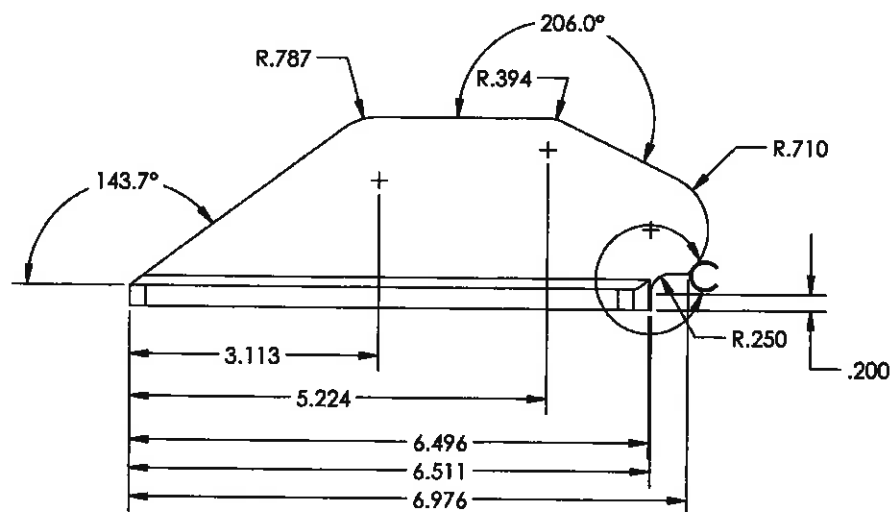
649.5010E = 200 ft. ①
 649.5011E = 99 pcs. ①
 649.5012E = 55 pcs ②
 649.5013E = 0 ②
 649.5014E = 8 pcs
 = 649.5010E
 3.34 ft/lpc

Top level
 649.4701

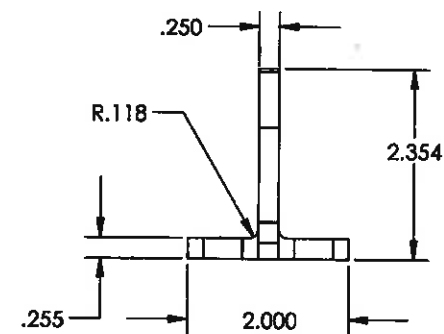
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649.5013



DETAIL C
SCALE 2:1.5



ORIGINAL DATE 11-02-11		3030 ENTERPRISE CT., SUITE A VISTA, CA 92081 (760)-724-5300	
DRAWN BY A. GRAY		CHECKED BY P. BRAVO	
DRAWING APPROVAL P. BRAVO		APICAL INDUSTRIES, INC. DBA DART AEROSPACE	
CONTRACT NO.		DEFLECTOR	
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ARE: 3 PLACE DECIMALS ±.01 2 PLACE DECIMALS ±.05 ANGLES ±.5°		MATERIAL B 07/M26	QTY. 649.5000
SCALE NONE		REV. D	

SHEET 4 OF 5



Dart Aerospace Ltd.
1270 Aberdeen St
Hawkesbury, ON
K6A 1K7
Canada

Tel (613) 632-5200

PURCHASE ORDER **POHB045220**



Supplier: KAI001-VU
Kaiser Aluminum
6520 W. Allison Road
CHANDLER, AR 72526 USA
Phone: 520 796 1097
Fax: 520 796 0596

Ship To: 1270 Aberdeen Street
Hawkesbury
ON
K6A 1K7 Canada
Phone: 613-632-5200

PO No: POHB045220
PO Date: 11/26/19
Due Date: 3/27/20
Purchase Order Revision:
Revision Date:
Ship-To Contact: Guerin, Kimberley
Phone: 613-632-5200 Ext: 298
kguerin@dartaero.com
Via: Ground
Payment Terms: Net 30
Freight Terms: Collect
Special Comments: QUOTE NO. 50861 2019-12-04

Items														
Line Item	Job	Part	Drawing	Supplier Part No	Item No	Description	Status	Account	Due Date	Order Quantity	Received Quantity	Balance	Unit Price (USD)	Extended Price
1	203738	649.5013P	649.5000 Rev D			Deflector as per drawing 649.5000 Rev D. Die spec to be sent for approval MAT'L: 7075-T651 PER AMS-QQ-A-250/12 OR 7075-T6511 PER AMS-QQ-A-200/11 ✓ EXTREME CARE MUST BE TAKEN TO PROTECT THE OUTSIDE SURFACE OF THE OUTSIDE TUBE. THE OUTSIDE SURFACE MUST BE SMOOTH AND FREE FROM SURFACE DEFECTS SUCH AS SCRATCHES, NICKS, OR DENTS	Firmed	-	3/27/20	252 ft.	0 ft	252 ft	\$12.134/ft	\$3,057.77
217 PCS? 144" 204 FT 48 FT DAS 82 9-89 APR 16 2020 DAS 82 9-89 APR 21 2020														
Line Item Note							\$350 Tooling fee + \$150 Packaging fee is added to the per ft price Export ready crate to be used for shipping AS9102 FAI charge of \$150 approved to invoice							
Grand Total: \$3,057.77														

Order Notes

Procurement Quality Clauses
A005 RIGHT OF ENTRY
A008 FIRST ARTICLE INSPECTION (FAI) BY SELLER, (DOCUMENTATION SENT TO DART AEROSPACE)
A012 CHEMICAL AND PHYSICAL TEST REPORTS
A016 PERSONNEL QUALIFICATION
A017 RAW MATERIAL IDENTIFICATION (AS APPLICABLE)
A026 CERTIFICATION OF MATERIAL CONFORMANCE
A041 QUALITY MANAGEMENT SYSTEM
A042 DART NOTIFICATION BY SUPPLIER
A043 RETENTION OF QUALITY DOCUMENT

A048 COUNTERFEIT PARTS AVOIDANCE, DETECTION, MITIGATION AND DISPOSITION PROGRAM
A049 SUPPLIER AWARENESS

Terms & Condition of Purchasing(Suppliers) and Procurement Quality Clauses are an integral part of our AS9100 requirements. To learn in detail, please visit www.dartaerospace.com for further explanation.

Plex 12/4/19 8:24 AM Dart.Guerin.Kimberley

KAISER ALUMINUM ALEXCO

6520 W. Allison Rd.
Chandler, AZ 85226
866-525-3926

INVOICE #
1502 - 271013

Sold To: 12195808

Dart Aerospace LTD
1270 Aberdeen St

Ship To: 12195808

Dart Aerospace LTD
1270 Aberdeen St

Hawkesbury

ON K6A 1K7

Hawkesbury

ON K6A 1K7

Date of Invoice 04/16/20	Customer Order Number POHB045220			Mill Lot # 205948
Standard Terms Net 30 Days	Incoterms Destination	Ecode	Press 8	H/T

Item #	ITEM DESCRIPTION OF EXTRUDED ALUMINUM PROFILE	QUANTITY SHIPPED	PRICE/USD	TOTAL
1	ORIGINAL INVOICE			
	Alloy: 7075 ✓ Temper: T6511 ✓	61 Lbs	\$8.12 /Lb.	\$495.32
	Specification: AMS QQ-A-200/11A ✓	48.00 Feet		
	Finished Length (in.) : 144.000 Die #: 30003	4 Pcs		
	CERTIFICATION REQUIRED			
Customer Stencil 649.5013P				
Profile #	649.5013 Rev D			
Packing List #:	14416	Total Gross Lbs:	72	
Packaging	Fiber Box	Num. of Boxes:	1	
NLR	EIN: 56-2553181			
ECCN 9A991	Schedule B: 7604.29.1000			
ACH:				
JPMorgan Chase Bank, NA				
Swift Code: CHASUS33				
Routing #: 021000021				
Account Name: Kaiser Aluminum Fabricated Products, LLC				
Account #: 304609064				
		SET-UP CHARGE		\$0.00
		TOOLING CHARGE		\$0.00
		EXACT PC COUNT		\$0.00
		MISC. CHARGE		\$0.00
		WEIGHT SURCHARGE		\$0.00

RECEIVED

APR 21 2020

DART AEROSPACE LTD.

Manufactured in the United States of America. These items are controlled by the U.S. Government and authorized for export only to the country of ultimate destination for use by the ultimate consignee or end-user(s) herein identified. They may not be resold, transferred, or otherwise disposed of, to any other country or to any person other than the authorized ultimate consignee or end-user(s), either in their original form or after being incorporated into other items, without first obtaining approval from the U.S. government or as otherwise authorized by U.S. law and regulations. All currency in US dollars.

Total Amount Due: \$495.32USD



6520 W. Allison Rd.
Chandler, AZ 85226
866-525-3926

INVOICE #
1502 - 270524

Sold To: 12195808
Dart Aerospace LTD
1270 Aberdeen St

Ship To: 12195808
Dart Aerospace LTD
1270 Aberdeen St

Hawkesbury

ON K6A 1K7

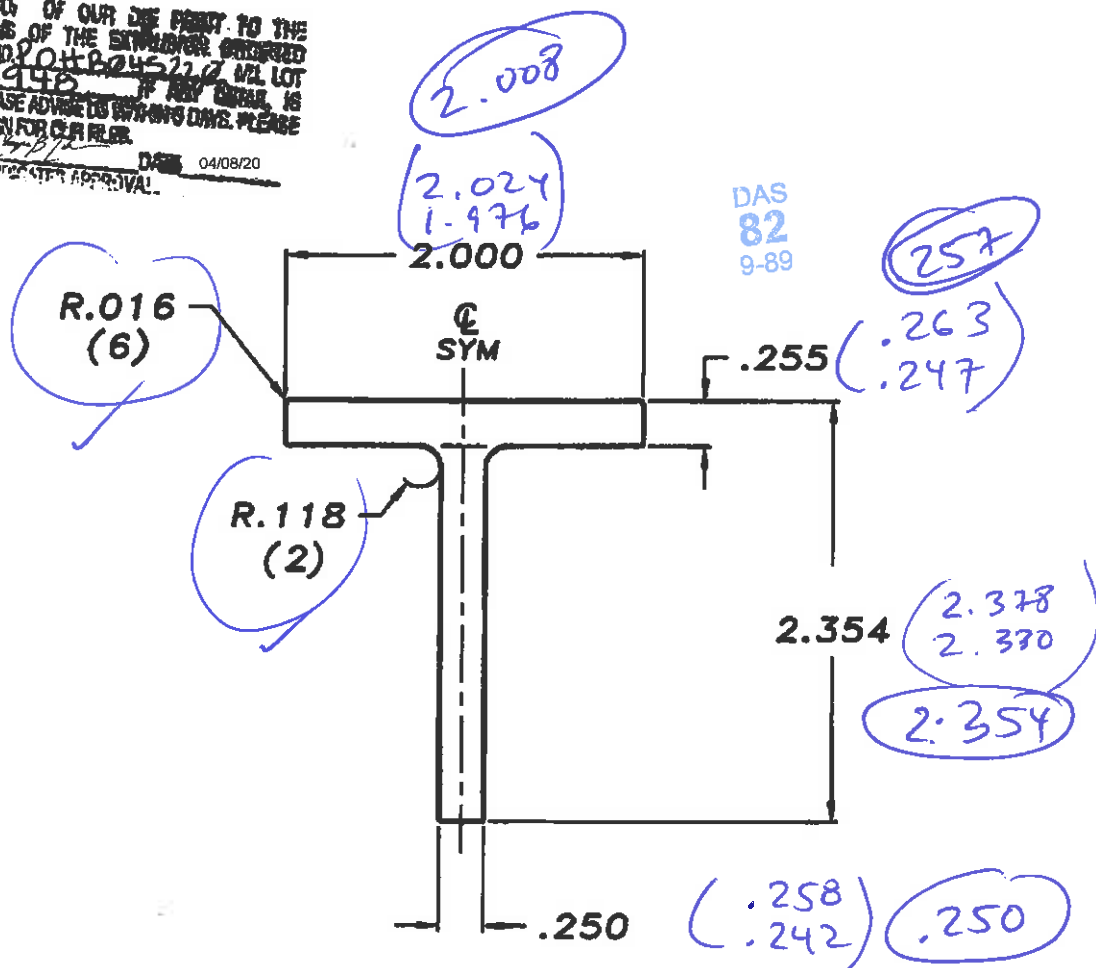
Hawkesbury

ON K6A 1K7

Date of Invoice 04/06/20		Customer Order Number POHB045220		Mill Lot # 205948	
Standard Terms Net 30 Days		Incoterms Destination		Ecode 8	
Press 8					
Item #	ITEM DESCRIPTION OF EXTRUDED ALUMINUM PROFILE			QUANTITY SHIPPED	PRICE/USD
1	ORIGINAL INVOICE				TOTAL
Alloy: 7075 ✓ Temper: T6511 ✓				263 Lbs	\$8.12 /Lb.
Specification: AMS QQ-A-200/11A ✓				204.00 Feet	\$2,135.56
Finished Length (in.): 144.000 Die #: 30003				17 Pcs	
CERTIFICATION REQUIRED					
Customer Stencil 649.5013P					
Profile # 649.5013 Rev D					
Packing List #: 14373				Total Gross Lbs: 307	
Packaging Fiber Box				Num. of Boxes: 4	
NLR EIN: 56-2553181					
ECCN 9A991 Schedule B: 7604.29.1000					
ACH: JPMorgan Chase Bank, NA Swift Code: CHASUS33 Routing #: 021000021 Account Name: Kaiser Aluminum Fabricated Products, LLC Account #: 304609064					
SET-UP CHARGE					\$0.00
TOOLING CHARGE					\$350.00
EXACT PC COUNT					\$0.00
MISC. CHARGE					\$300.00
FREIGHT SURCHARGE					\$0.00
Total Amount Due:				\$2,785.56 USD	

Manufactured in the United States of America. These items are controlled by the U.S. Government and authorized for export only to the country of ultimate destination for use by the ultimate consignee or end-user(s) herein identified. They may not be resold, transferred, or otherwise disposed of, to any other country or to any person other than the authorized ultimate consignee or end-user(s), either in their original form or after being incorporated into other items, without first obtaining approval from the U.S. government or as otherwise authorized by U.S. law and regulations.

CAUTION
THIS IS A COPY OF OUR DIE PRINT TO THE
SPECIFICATIONS OF THE EXTRUDER ORDERED
ON YOUR PO NO. 204522.0 M/L LOT
NO. 205948. IF ANY ERROR IS
NOTICED PLEASE ADVISE US WITHIN 30 DAYS. PLEASE
SIGN AND RETURN FOR OUR FILE.
APPROVED: [Signature] DATE: 04/08/20
NO RESPONSE INDICATES APPROVAL.



THIS IS NOT A KAISER ALEXCO DESIGN. THIS IS KAISER ALEXCO'S
INTERPRETATION OF THE DESIGN REQUESTED BY ITS CUSTOMER.
THE CUSTOMER MUST CHECK THE DRAWING BEFORE USING AS
KAISER ALEXCO ACCEPTS NO RESPONSIBILITY OR LIABILITY FOR THE
PERFORMANCE OF PRODUCTS PRODUCED FROM THIS DESIGN. KAISER
ALEXCO MAKES NO WARRANTY OF FITNESS FOR A SPECIFIC PURPOSE
WITH REGARD TO EXTRUDERS PRODUCED PRIOR TO THIS DRAFTING.
KAISER ALEXCO'S ONLY WARRANTY IS STATED ON THEIR SALES
ORDER ACKNOWLEDGEMENT FORM.

		DWN.: DLB	SCALE: FULL	KAISER ALUMINUM ALEXCO
		1st CHK.: TM	ALLOY:	
		2nd CHK.: AS	DATE: 2/18/20	
		TOLERANCES	TAMPING DIMENSIONS	
REVISIONS		STRAIGHTNESS:	.0125	CUSTOMER P/N: 649.5013 REV. D
DESIGNER DART AEROSPACE		FLATNESS:	.004	EXT. CLASS.: SOLID
PROFILE NAME TEE		TWIST:	.019	FEDERAL STANDARD 245 TOLERANCES (ANSI H 35.2) APPLY UNLESS OTHERWISE NOTED
REF. P/N:		ANGULARITY:	1°30'	No. OF HOLES: 3
REF. P/N:				BLANK SIZE: 8 X 1-1/4"
AREA: 1.040	PERIM.: 8.566	C.C.D.: 2.775		CONTAINER: 8-3/8"
WT/FT: 1.248	FACTOR: 7	EXT. RATIO: 18:1/3		BACKER: 8-404
DIE NO. U8-30003-A				BOLSTER: B14-237
				SUB-BOLSTER: SB14-188
				CANISTER: C7-122-3

Sheet 1 of 3

a) if above part number is a detail part only, go to Field 14
b) if above part number is an assembly, go to the "INDEX" section below

INDEX of part numbers or sub-assembly numbers required to make the assembly noted above.

FAI Complete ☒ FAI not Complete ☐

Signature indicates that all characteristics are accounted for meet drawing requirements, or are properly documented for disposition

Date 4/17/2020

Date _____

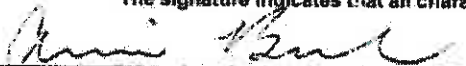
Date _____

Sheet 2 of 3

AS9102 Rev B

FAIR Form 3: Characteristic Accountability, Verification and Compatibility Evaluation

Sheet 3 of 3

Part Number				Part Name		Serial Number	FAI Report
649.5013				Tee		N/A	205948
Characteristic Accountability				Inspection / Test Results			
Char No.	Reference Location	Char. Designator	Requirement & Tolerance	Results	Designed Tooling	Non-Conformance Number	Additional Data / Comments
1	NA	NA	2.000 ± 0.024	2.010	NA	NA	
2	NA	NA	0.250 ± 0.008	0.252	NA	NA	
3	NA	NA	2.354 ± 0.024	2.351	NA	NA	
4	NA	NA	0.250 ± 0.008	0.248	NA	NA	
5	NA	NA	0.100 ± 0.016	0.109 - 0.105	NA	NA	
6	NA	NA	0.016 ± 0.016	0.018 - 0.031	NA	NA	
7	NA	NA			NA	NA	
8	NA	NA			NA	NA	
9	NA	NA			NA	NA	
10	Length	NA	144 inches + 1/8 / - 0	144 1/8	NA	NA	
11	Straightness	NA	0.0125" / R	0.045	NA	NA	
12	Flatness	NA	0.004" / ft	0.001	NA	NA	
13	Twist	NA	1/2" ± R (0.019") 5' max	0.025	NA	NA	
14	Angle	NA	90° ± 1.5°	90	NA	NA	
The signature indicates that all characteristics are accounted for; meet drawing requirements or are properly documented for disposition Signature  Date <u>4/7/2020</u>							



6520 W. Allison Rd.
Chandler, AZ 85226
866-525-3926

CERTIFIED TEST REPORT

Dart Aerospace LTD
1270 Aberdeen St

Mill Lot #: **205948** *h/c*

Hawkesbury

ON K6A 1K7

Invoice #: 271013

Customer Order #: POHB045220	Shipment Complete	Date: 04/16/20
Produced To 649.5013 Rev D	Packaging Fiber Box	

Item Number: **1** Die Number: **30003** Net Weight (Lbs.): **61**
Alloy - Temper: **7075 - T6511** ✓ Cut Length (in.): **144.000** No. of Boxes: **1**
Specifications: **AMS QQ-A-200/11A** ✓ No. of Pieces: **4**
Customer Stencil: **649.5013P** ✓ Feet: **48.00**

Remarks:

Mechanical Test Reports			YS	UTS	% Elong.	Conductivity	SCF
Mill Lot #	# Pcs.	Alloy - Temper	(ksi)	(ksi)		(%IACS)	
205948 - 2X <i>h/c</i>	4	7075 - T6511	80.7	88.7	11.0	33.1	

DAS 82 9-89

Actual Chemistry

Heat	Alloy	%Si	%Fe	%Cu	%Mn	%Mg	%Cr	%Zn	%V	%Ti	%Zr
F19-44327	7075	0.10	0.15	1.61	0.03	2.48	0.20	5.69	0.011	0.028	0.014

Chemical Composition Limits

Alloy	SI Min	FE Min	CU Min	MN Min	MG Min	CR Min	ZN Min	TI Min	ZR Min	V Min	Others Each
7075	0.00	0.00	1.2	0.00	2.1	0.18	5.1	0.00			0.05
Correct Cert	SI Max	FE Max	CU Max	MN Max	MG Max	CR Max	ZN Max	TI Max	ZR Max	V Max	Others Total
	0.40	0.50	2.0	0.3	2.9	0.28	6.1	0.20			0.15
Remainder is Aluminum											

Certified Test Report: Kaiser Aluminum Alexco LLC, hereby certifies that metal shipped under this order was made in the USA from material melted in the USA, complying with FAR BAA 52.255-1 TAA 52.255-5 AND DFARS BAA 252.225-7001, and was inspected and tested and found to be in conformance with the applicable specifications forming a part of the description set forth in Kaiser Alexco's sales acknowledgement form. Any warranty is limited to that shown on Kaiser Alexco's general terms and conditions of sale. Test reports are

These items are controlled by the U.S. Government and authorized for export only to the country of ultimate destination for use by the ultimate consignee or end-user(s) herein identified. They may not be resold, transferred, or otherwise disposed of, to any other country or to any person other than the authorized ultimate consignee or end-user(s), either in their original form or after being incorporated into other items, without first obtaining approval from the U.S. government or as otherwise authorized by U.S. law and regulations.

Travis Schmidt
Travis Schmidt: Technical Manager



6520 W. Allison Rd.
Chandler, AZ 85226
866-525-3926

CERTIFIED TEST REPORT

Dart Aerospace LTD
1270 Aberdeen St

Mill Lot #: **205948**
HPC

Hawkesbury

ON K6A 1K7

Invoice #: 270524

Customer Order #: POHB045220	Shipment Partial	Date: 04/06/20
Produced 649.5013 Rev D	Packagin Fiber Box	

Item Number: 1 Die Number: 30003 Net Weight (Lbs.): 263
Alloy - Temper: 7075-T6511 ✓ Cut Length (in.): 144.000 No. of Boxes: 4
Specifications: AMS QQ-A-200/11A ✓ No. of Pieces: 17
Customer Stencil: 649.5013P ✓ Feet: 204.00

Remarks:

Mechanical Test Reports			YS	UTS		Conductivity	
Mill Lot #	# Pcs.	Alloy - Temper	(ksi)	(ksi)	% Elong.	(%IACS)	SCF
205948-1 HPC	17	7075-T6511	79.8	88.3	10.1	32.9	
DAS 82 9-89							

Actual Chemistry

Heat	Alloy	%Si	%Fe	%Cu	%Mn	%Mg	%Cr	%Zn	%V	%Ti	%Zr
F19-44327	7075	0.1	0.15	1.61	0.03	2.48	0.201	5.69	0.011	0.028	0.014

Chemical Composition Limits

Alloy	SI Min	FE Min	CU Min	MN Min	MG Min	CR Min	ZN Min	TI Min	ZR Min	V Min	Others Each
7075	0.00	0.00	1.2	0.00	2.1	0.18	5.1	0.00			0.05
Correct Cert	SI Max	FE Max	CU Max	MN Max	MG Max	CR Max	ZN Max	TI Max	ZR Max	V Max	Others Total
	0.40	0.50	2.0	0.3	2.9	0.28	6.1	0.20			0.15
Remainder is Aluminum											

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Travis Schmidt: Technical Manager

This test report shall not be reproduced, except in full, without the written approval of Kaiser Aluminum Alexco.

MATERIAL RECEIPT INSPECTION FORM

MATERIAL: 649.5013P
DATE: APR 21 2020

PO / BATCH NO.: POMB045220
S272276 / S270883

MATERIAL CERT REC'D: YES
 QUANTITY RECEIVED: 252 FT
 QUANTITY INSPECTED: 252 FT
 QUANTITY REJECTED:

THICKNESS ORDERED: SEE DRW.
THICKNESS RECEIVED: SEE DRW.
SHEET SIZE ORDERED:
SHEET SIZE RECEIVED:

DESCRIPTION	NCR (Check Y/N)		COMMENTS
SURFACE DAMAGE	Y	N	
CORRECT FINISH	Y	N	
CORROSION	Y	N	
CORRECT GRAIN DIRECTION	Y	N	
CORRECT MATERIAL PER M-DRAWING	Y	N	AMS QQ-A-200/11A
CORRECT THICKNESS	Y	N	
PHOTO REQUIRED	Y	N	
CORRECT REF # TO LINK CERT	Y	N	M/T 205948
CORRECT MATERIAL IDENTIFICATION	Y	N	
CORRECT M# ON THE MATERIAL	Y	N	
DOES THIS MATERIAL REQUIRE ENGINEERING SIGN OFF	Y	N	
DOES THIS REQUIRE AN EXTRUSION REPORT	Y	N	

CUT SAMPLE PIECE OF MATERIAL AND PREFORM A HARDNESS CHECK. RECORD RESULTS BELOW					
TYPE OF MATERIAL SIZE OF TEST SAMPLE HARDNESS / DUROMETER READING	HRC	HRB	DUR A	DUR D	WEBSTER

testers located in the Quality Office

QC-18 INSPECTION		ENGINEERING SIGNOFF (if required)	
INSPECTED BY: _____ DATE: APR 21 2020	SIGNED OFF BY: _____ DATE: _____		

Attach this inspection sheet with the corresponding material cert and remit to be scanned and received in

Guillaume Gamache-Beauchamp

From: Steven Drouin
Sent: 28 avril 2020 17:27
To: Patrick Duval; Guillaume Gamache-Beauchamp
Subject: Re: 649.5013P Material

See bellow from vista engineering

Sent from my BlackBerry — the most secure mobile device — via the Koodo Network

From: jbecker@dartaero.com
Sent: April 28, 2020 5:23 PM
To: sdrouin@dartaero.com
Subject: RE: 649.5013P Material

I think this is acceptable.

DAS
82
9-89

Regards,

JACOB BECKER
Lead Sustaining Engineer

DART AEROSPACE
T 1 760 509-1639
M 1 760 691-9108
F 1 760 758-9612
1-800-556-4166
www.dartaerospace.com



From: Steven Drouin <sdrouin@dartaero.com>
Sent: Tuesday, April 28, 2020 1:14 PM
To: Jacob Becker <jbecker@dartaero.com>
Subject: FW: 649.5013P Material

Hi Jacob

We received material with a 0.025 twist and the M-drawing is asking for a max twist of 0.019 would this be acceptable with 649.5013 ? (see last page of attached document for FAI)

I think this would be ok but I will like to confirm with you.

Steven

From: Guillaume Gamache-Beauchamp <ggamachebeauchamp@dartaero.com>
Sent: Tuesday, April 28, 2020 9:55 AM

To: Steven Drouin <sdrouin@dartaero.com>

Cc: Patrick Duval <pduval@dartaero.com>

Subject: 649.5013P Material

Just a friendly reminder

Hello Steven,

Can you review the attached document. I has an FAI for this material. The "T" dimensions are OK.

Their results for the straightness and twist are a little off and we don't really have an accurate way of measuring this.

Thank you

Guillaume

LR

Tue 22/2020



NCR No.

20-8168

WORK ORDER NON-CONFORMANCE / ROUTE UPDATE

Route update only

Job: 203738 Part No. 649.5013E		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☒		DEPARTMENT/PROCESS Skid-tube ☐ Cross tube ☐ Eng. (Non-AW) ☐ Engineering ☐ Machining ☐ Small Fab ☐ Prod. Eng. Coord. ☐ Water Jet ☐ Large Fab ☐ Finishing ☐ Rec/Store/Packaging ☐ Supplier ☒ Quality ☐																															
Date : APR 2 2020		Sequence #: QC 6		QTY Affected : 252 FT		MRB (QSI042) DAS 20-04-29 9-89 per attach Email.																													
Description Work Order Deviation MATERIAL RECEIVED WITH A 0.025 TWIST AND THE M-DRAWING IS ASKING FOR A MAX TWIST OF 0.019. ACCEPTABLE?				Disposition THIS IS ACCEPTABLE (SEE ATTACHED EMAIL)																															
				Completed By DAS 82 29 9-89 APR 28 2020																															
				Lead hand / Supervisor DAS 9 9-89 20-04-29																															
				QC / QA Coordinator DAS 9 9-89 20-04-29																															
Root Cause Operator ☐ Manufacturing Process ☐ Equip/Tooling ☐ Handling/Presservation ☐ Material ☒ Product Improvement ☐ Process Improvement ☐ Human Factors ☐		FAULT CATEGORY <table border="0"> <tr> <td>☐ Pressure/Forced</td> <td>☐ Contamination</td> <td>☐ Power Loss/Surge</td> <td>☐ Positioned Wrong</td> </tr> <tr> <td>☐ Bending</td> <td>☐ Misaligned/off center</td> <td>☐ Folio/Program</td> <td>☒ Outside Tolerance</td> </tr> <tr> <td>☐ Crushing</td> <td>☐ BOM/Route</td> <td>☐ Grain Direction</td> <td>☐ Drawing</td> </tr> <tr> <td>☐ Cracks</td> <td>☐ Broken/Damage/Defect</td> <td>☐ Weld</td> <td>☐ Finish</td> </tr> <tr> <td>☐ Crimp/Kink/Ripple/Wave/Twist</td> <td>☐ Incomplete/Unclear Instructions</td> <td>☐ Wrong Stock Pulled</td> <td>☐ Part Lost/Missing</td> </tr> <tr> <td>☐ Marks/Chatter</td> <td>☐ Drill Holes</td> <td>☐ Out of Sequence</td> <td>☐ Misread</td> </tr> <tr> <td>☐ Mislabeled</td> <td>☐ Fit/Function</td> <td>☐ Off-set/Set-up</td> <td></td> </tr> </table>						☐ Pressure/Forced	☐ Contamination	☐ Power Loss/Surge	☐ Positioned Wrong	☐ Bending	☐ Misaligned/off center	☐ Folio/Program	☒ Outside Tolerance	☐ Crushing	☐ BOM/Route	☐ Grain Direction	☐ Drawing	☐ Cracks	☐ Broken/Damage/Defect	☐ Weld	☐ Finish	☐ Crimp/Kink/Ripple/Wave/Twist	☐ Incomplete/Unclear Instructions	☐ Wrong Stock Pulled	☐ Part Lost/Missing	☐ Marks/Chatter	☐ Drill Holes	☐ Out of Sequence	☐ Misread	☐ Mislabeled	☐ Fit/Function	☐ Off-set/Set-up	
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